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## Mycological Notes and new Species

BY C. L. SHEAR

FUSICLADIUM FASCICULATUM C. & E. Grevillea, 6: 88. Mr. 1878

A careful study and comparison of authentic specimens of this species, issued by Ellis in North American Fungi no. 545, with *Scolecotrichum euphorbiae* Tracy & Earle, Bull. Torrey Club, 23: 209. May 1896, as represented in the herbarium of the Department of Agriculture by specimens marked "type material" and sent by Tracy and Earle shows that they are the same species. Both are on stems and leaves of *Euphorbia*. The form on stems, N. A. F. 545, appears more effuse than that on leaves, Fungi Col. 380, which is identical with the Tracy & Earle material. The conidia vary considerably in size. The effuse form, N. A. F. 545, has conidia  $9-16 \times 5-7 \mu$ . Tracy & Earle's specimen has somewhat larger conidia, varying from  $13-22 \times 6-8 \mu$ . As pointed out by Tracy & Earle this is not a typical *Scolecotrichum* in the sense in which the genus is defined by Saccardo. What the typical *Scolecotrichum* of Kunze & Schmit, Myc. Heft 1: pl. 1. f. 5. 1817, is does not, however, seem very clear. It is a monotypic genus, the authors having referred to it only one species, *S. virescens*, which is rather indefinitely described and poorly figured. Unless specimens of the type are extant it is doubtful whether the genus can stand.

The plant under discussion belongs however, to the group to which this generic name is at present applied rather than to *Fusicladium* and unless there is an older tenable name should be designated ***Scolecotrichum fasciculatum*** (C. & E.).

LACHNUM ENGELMANNI Tracy & Earle, Pl. Bak. 1<sup>1</sup>: 25. 1901

An examination of this species as represented by type material (no. 1058 Baker, Earle & Tracy on *Picea Engelmanni*, La Plata Mts., Colo.) seems to indicate that it is identical with *Peziza* (*Dasyscyphae*) *arida* Phill. Grevillea, 5: 117. pl. 89. f. 13. 1877.

We have had no opportunity to examine type material of Phillips' species, which was collected by Harkness & Moore on

pine bark in the Sierra Nevada mountains, but his description and plate agree so closely with these specimens and with other material determined by Ellis and Rehm that there seems little doubt about the matter. Ellis issued the species (no. 1246 N. A. F. on bark of *Abies Menziesii* from Colorado) as *Peziza fuscousanguinea* Rehm, but Dr. Rehm does not regard it as his species. The typical plant, so far as agreement with Phillips' description and figure goes, was issued by the writer in F. Col. no. 1414. It was collected in the Powder River Mountains of eastern Oregon, growing abundantly on the bark of recently cut pines. The plant is rather frequent on bark of various dead conifers in the West, especially in subalpine regions.

**Cryptoporus** gen. nov.

*Cryptoporus* Peck as a section of *Placodermei* of the genus *Polyporus*, Bull. Torrey Club, 7: 104. Oct. 1880.

The type of the genus is **Cryptoporus volvatus** (Peck). *Polyporus volvatus* Peck, Rep. N. Y. St. Mus. 27: 98. *pl. 2. f. 3-6*. 1875.

Three varieties were described by Professor Peck, only one of which appears to us of varietal importance, **Cryptoporus volvatus Torreyi** (Ger.). *Polyporus volvatus Torreyi* Gerard, Bull. Torrey Club, 7: 104. *f. 1-3*. O. 1890.

This fungus is so different from any other *Polyporus*, especially in the thick volva-like extension of the margin of the pileus which covers the pores with the exception of a small circular aperture, as to deserve in our opinion generic rank. Professor Peck, *l. c.*, has given a very full description of the fungus to which we need only add the following extension of range and new hosts:

Vicinity of Washington, D. C., on *Pinus Virginiana*, collected by the late G. H. Hicks, also by the writer.

Grand Lake, Colorado, on *Pinus contortus Murrayana*, no. 1107, Shear & Bessey.

Blue Mountains, Oregon, on undetermined conifer, collected by the writer, 1899.

**Secotium Arizonicum** Shear & Griffiths sp. nov.

Peridium subglobose to subpyriform, pale yellowish-white, smooth, 2-4 cm. high  $\times$  1.5-3 cm. in diameter, rather thin and

fragile when dry, sessile or occasionally very short stipitate, rupturing more or less irregularly in longitudinal slits from the apex; columella not well developed, usually not reaching the apex of the peridium; gleba composed of closely anastomosing thin plates forming more or less elongated longitudinal cells, pale sulphur yellow when dry, becoming slightly brownish at maturity; spores spherical or subspherical, pale creamy white, smooth, guttulate,  $8-12\ \mu$  diam., frequently with a very short pedicel.

Type no. 1630, D. Griffiths, mesa near Tucson, Arizona, Sept. 1900. Type material also distributed in Griffiths, West American Fungi, no. 323.

This species seems more nearly related to *S. Warnei* Pk. than any other known species. It differs, however, in its much smaller size, different mode of dehiscence and lighter colored peridium and gleba, as well as in the poorly developed columella which appears to but rarely, if ever, reach the apex of the peridium and is sometimes almost or quite lacking.

***Scleroderma pteridis* sp. nov.**

Peridium globose or depressed-globose, sessile, sordid white or faintly yellowish, irregularly squamose, fibrose-radiate, 3-6 cm. diameter; wall 3-8 mm. thick, separating from the gleba in drying; gleba firm, somewhat indistinctly areolate, purplish-brown; columella none; spores irregularly globose, purplish-brown, roughened with short spines,  $6-8\ \mu$  diameter.

Growing attached to dead rhizomes of *Pteris aquilina* in the side of a recent excavation, two to four feet below the surface and embedded in the earth.

Type no. 1115 collected by the writer, wagon road near Baker Creek, six miles west of McMinnville, Oregon, July, 1899.

The plant seems most nearly related to *Scleroderma Geaster*. None of the specimens were entirely mature so that the method of dehiscence is uncertain; but the peridium is much thicker and the spores smaller and lighter colored than in *S. Geaster*. The plant is remarkable on account of its subterranean habit and its connection with the rhizomes of *Pteris*.

***Cucurbitaria celtidis* sp. nov.**

Perithecia .35-.5 mm. in diameter, densely gregarious or subcespitose, covering continuous areas of dead branches, erumpent or partially immersed in the bark, depressed globose, carbonaceous,

somewhat granular roughened, frequently partially collapsed, provided with a papilliform ostiolum; asci cylindric, short-stipitate or subsessile,  $140-180 \times 16 \mu$ ; sporidia uniseriate, overlapping somewhat, hyaline at first then yellowish and finally dark brown, with 3-5 transverse septa and one longitudinal septum, slightly constricted at the septa,  $24-27 \times 8 \mu$ ; paraphyses branched above, equally or exceeding the asci and about  $3 \mu$  in diameter.

Type material, no. 383, collected by the writer on dead branches of *Celtis occidentalis*, Osborne, Kansas, March, 1894. The plant is scarcely a typical *Cucurbitaria* and was at first referred to *Teichospora*, but I have referred it to the former genus in deference to the opinion of Dr. Rehm to whom specimens were submitted.

**Fusicladium robiniae** sp. nov.

Hypophyllous or sometimes amphigenous; spots reddish-brown, usually numerous, scattered, .5-1.5 mm. diam., circumscribed by a darker, reddish-brown, slightly elevated line; tufts of fertile hyphae small, rather dense, arranged in small groups; hyphae light chestnut-brown, slightly flexuous, irregular toward the apex, mostly non-septate,  $100-130 \times 2-3.5 \mu$  diam.; conidia clavate-fusiform, light-brown, uniseptate, very slightly constricted, one cell slightly larger than the other,  $20-30 \times 4-5 \mu$ .

On living leaves of *Robinia pseudacacia*, Glen Sligo near Takoma Park, D. C. Type material, no. 935, Mr. & Mrs. C. L. S., May 3, 1899, deposited in herbarium U. S. Dept. of Agriculture, and to be distributed in Fungi Columbiana, Century XVII.

The affected leaves soon turn yellow and fall. The fungus proved quite destructive to the foliage on several trees in the locality mentioned.

**Illosporium conicolum** E. & E. sp. nov.

Sporodochia yellowish-rose color, minute,  $75-80 \mu$  diameter, globose and sessile by a short, stipe-like base; conidia globose-conic, hyaline,  $6-8 \mu$  diam., forming a continuous superficial layer borne on obscure, short, thick, conglutinated hyphae hardly distinguishable from the conidia.

Issued in Ellis & Everhart, Fungi Columbiana, no. 1497. On scales of pine cones (*Pinus Virginiana*), Takoma Park, D. C., December, 1899, and March, 1902. C. L. Shear. The above description is supplied by Mr. Ellis.

Allied to *Illosporium coccinellum* Cooke.

**Phragmidium Andersoni** sp. nov.

I. and II. not seen. III. Sori amphigenous, slightly pulvinate, yellowish, scattered, sparse or abundant, 200–400  $\mu$  diameter; teleutospores oblong-cylindric, densely tuberculate-roughened, nearly black and opaque when mature,  $60-75 \times 32-34 \mu$ , 2–4-septate; septa convex; apex with a small, blunt, nearly hyaline papilla which is occasionally obscure; pedicel colorless, 60–105  $\mu$  long, the lower half with an oblong or elliptical rugulose roughened fistulose enlargement 15–20  $\mu$  diameter.

Type material no. 319 Griffiths, West American Fungi on *Potentilla fruticosa*, Big Horn Mts., Wyoming, Williams & Griffiths, August, 1898. Other specimens examined: No. 137 Anderson, Parasitic Fungi Mont. Upper Sand Coulee, Mont., August, 1888, on *Potentilla fruticosa* Myc. Herb. Dept. of Agriculture and no. 319a Griffiths, West Amer. Fungi. Collected on same host by C. L. S. & E. A. Bessey, no. 988, near Grand Lake, Colo.; also no. 1201 Merrill & Wilcox, Jackson, Wyo., 1901. This was first collected, so far as I know, by my late lamented friend, F. W. Anderson, whose name I have associated with it. It appears quite different from any of the species heretofore described on *Potentilla* but seems related to *P. rubi*, especially in the character of the pedicel.

**Aecidium atriplicis** sp. nov.

Spermagonia not seen.

Pseudoperidia hypophyllous, thickly and mostly evenly scattered over the surface, .5–1 mm. long, 240–320  $\mu$  diameter, closely surrounded at the base by the ruptured epidermis; margin coarsely crenate-dentate; cells mostly irregularly pentagonal, 20–30  $\mu$  diameter, densely reticulate-ridged, appearing densely and minutely papillate with low magnification; spores smooth, yellowish, irregularly globose, 20–24  $\mu$  diameter.

On leaves of *Atriplex Nuttallii*, Montrose, Colo. Type no. 975, C. L. S., July, 1897. Type material, Griffiths, West American Fungi, no 321. The fungus attacks almost or quite every leaf of the plants affected, making them dwarfed and stunted so that they produce little or no inflorescence. The leaves are about normal in appearance on the upper surface, but slightly thickened and below the normal in size.

***Aecidium zephyranthis* sp. nov.**

Spermagonia sordid yellowish, occupying circular yellowish spots 1–2 mm. in diameter; spermatia globose or subglobose, 2–3  $\mu$  diameter.

Pseudoperidia amphigenous, crowded in 1–4 irregular circular series about the spermagonial spots, short with white torn edges, 200–300  $\mu$  diameter, cells irregularly quadrangular or pentagonal, 21–35  $\mu$  diameter, closely reticulated, appearing densely and minutely papillate under ordinary magnification; spores yellowish, smooth, irregularly globose, 18–25  $\mu$  diameter.

On leaves of *Zephyranthes* sp. near Talpam, Valley of Mexico, Mexico, Dr. J. N. Rose, no. 5478, July 15, 1901. With a  $\frac{1}{6}$ - or  $\frac{1}{8}$ - in. objective the cells of the pseudoperidia appear papillate but with a  $\frac{1}{12}$ - oil immersion the surface is seen to be densely reticulate-ridged.

***Diatrypella rimosa* sp. nov.**

Stromata scattered or somewhat gregarious, erumpent, mostly elliptical, sometimes suborbicular, white within, 1–3 mm. long mostly 2 mm., slightly constricted at the base, closely surrounded by the ruptured epidermis and a black circumscribing line which reaches to the wood leaving a whitish scar when the bark is removed; disk plane or slightly convex, nearly smooth except for the slightly prominent indistinctly 4-sulcate ostiola, transversely rimose; perithecia 5–15, monostichous, ovate or angular by mutual pressure; asci elongate-clavate, long-stipitate, paraphysate, 90–135  $\times$  6–7  $\mu$  (p. sp. 60–70  $\times$  6–7); paraphyses numerous, slender, multiguttulate, longer than the asci; sporidia numerous, yellowish-brown in mass, slightly curved, 5–7  $\times$  1.5  $\mu$ .

Type material on *Alnus* sp., Wallowa Lake, Oregon, no. 980, C. L. S., 1899, distributed in Griffiths, West American Fungi, no. 320. Apparently most nearly related to *D. discoidea alni* Cooke. but differs in having the surface of the disk almost pure black, the ostiola less conspicuous and not so distinctly stellate, and also in its rimose character.

From *D. tocciaeana* it differs in the form and color of the stroma, the stroma being contracted at the base instead of enlarged. From *D. verrucaeformis* it differs in its more regular, smoother, darker and rimose stroma and less conspicuous and less regular ostiola as well as in the measurements of the asci.

***Pleomassaria magnoliae* sp. nov.**

Perithecia gregarious, seated on the inner bark and permanently covered by the slightly pustulate epidermis, depressed spherical or sublenticular, thick-walled, coriaceous-carbonaceous, 600–800  $\mu$  diam., with a small conical ostium which just pierces the epidermis; asci clavate, very short-stipitate, 8-spored, 195–230  $\times$  55–60  $\mu$ ; paraphyses filiform; sporidia inordinate, mostly massed near the apex of the ascus, oblong-ovate, constricted below the middle, at first hyaline and 3–6-septate, then olivaceous and muriform-septate, finally deep brown, enclosed in a hyaline envelope, 66–78  $\times$  21–23  $\mu$  exclusive of envelope.

On dead *Magnolia obovata*, cultivated on grounds of the Dept. of Agriculture from China and Japan, March 12, 1902. Type material, C. L. S. no. 1035 and Fungi Col. Century XVII.

Associated with *Camarosporium magnoliae* Shear of which it may be the mature form.

***Camarosporium magnoliae* sp. nov.**

Perithecia same as in *Pleomassaria magnoliae* but slightly smaller; sporules subglobose to clavate, at first hyaline, becoming deep olive-brown and densely muriform-septate at maturity, sessile, body elliptic with a short basal prolongation which is 2–3-septate, 100–112  $\times$  28  $\mu$ ; paraphyses rather stout, septate, 45–70  $\times$  7–8  $\mu$ .

On dead *Magnolia obovata* associated with *Pleomassaria magnoliae*, U. S. Dept. of Agriculture Grounds, Washington, D. C., March 12, 1902, C. L. S., no. 1034.

Members of this genus have been regarded as pycnidial forms of *Pleomassaria* but this has not been demonstrated by cultures so far as I know. The perithecia of the two forms described above are so nearly identical that it seems probable that the asci are developed in the same perithecia as the sporules.

***Haplosporella rhizophila* sp. nov.**

Stromata .5–1.5 mm. in diam., gregarious or crowded, erumpent, pulvinate-verrucose, deep brownish-black, carbonaceous, somewhat pulverulent, rather regular in outline and somewhat contracted at the base which is closely surrounded by the bark; cells of the stroma 2–10, monostichous, very irregular in size and shape, partitions membranous, composed of light olivaceous hyphae; ostiola inconspicuous, plane or slightly prominent; sporules oblong-elliptic, frequently inequilateral, deep olivaceous, brown, 15–21  $\times$  6–8  $\mu$ , usually uniguttate; sporophores less than



the length of the sporules ; paraphyses abundant in mature plants, very variable in length but much exceeding the spore, 2–2.5  $\mu$  in diameter.

Type on dead, exposed roots of *Ulmus* sp., Lincoln, Neb., no. 981. C. L. Shear, March 30, 1895. Type material deposited in the Myc. Herb. U. S. Dept. of Agriculture.

In a poorly developed condition the stroma is very small and almost simple, suggesting *Sphaeropsis* but examination shows that this is an abnormal, aborted state. The cells of the stroma do not all appear to be entirely distinct but some seem to connect with each other. The spores of this are almost identical with those of *Sphaeropsis ulmca* Ell. & Barth. with type material of which I have been able to compare it through the kindness of Mr. Bartholomew. There is no resemblance between the two plants in other respects however.

PESTALOZZIA GUEPINI **vaccinii** subsp. nov.

Sporules elliptic to oblong-elliptic, somewhat inequilateral, usually 4-septate, 21–24  $\times$  8–9  $\mu$ , the three central cells dark colored, usually guttulate with the septum below the upper one darker colored than the others ; apical setae 3–4, 22–35  $\mu$  long ; basal seta 6–12  $\mu$ . The fungus forms no spots on the leaves but develops evenly over the surface of the yellow fallen leaves, apparently preferring the lower surface.

Type no. 1146, on dead leaves of *Vaccinium macrocarpon* kept in a moist chamber in the laboratory for about a week. Plants from which the leaves were taken were collected at Parkdale, N. J., by the writer.

This plant has apparently been referred heretofore to *P. guepini*, Desm. Ann. Sci. Nat. Bot. 2d Ser. 3: 182. t. 4. f. 1–3. 1848. It agrees fairly well in many respects with the description and figures of that species but differs decidedly from the specimens issued in the exsiccatae at hand. Hosts are given by Desmazierès (*l. c.*) as follows: "Habitat in foliis siccis Camelliae et Magnoliae" and his Pl. Crypt. fasc. XXII. is cited as containing a specimen. Specimens on *Camellia Japonica* from three different collections (no. 150 Briosi & Cavara, Fun. Par. Pia. Col. no. 974 ; Saccardo Myc. Ven. and an unnumbered specimen from G. W. Clinton, Buffalo, N. Y.) agree well with each other and are well represented by the figure accompanying Briosi & Cavara's specimens.

The spores are however quite different from those figured by Desmazierès. The leaf figured by him appears to be that of *Camellia* rather than *Magnolia*, but the spores may possibly have been figured from the specimen on *Magnolia* to which he refers in his description.

No. 553 Rav. Fun. Amer. on persimmon (*Diospyros*) and 526 E. & E. N. A. F. on *Camellia Japonica* were distributed under this name but the material in the Department herbarium is old and poor, showing no spores.

Whichever may prove to be the type of Desmazierès' species, we believe the plant we have is sufficiently characteristic to deserve recognition as a variety at least. The fungus appears abundantly on apparently healthy leaves after they have been dampened and kept in a moist chamber for a week or ten days.

**Plectrothrix** gen. nov.

Sterile hyphae creeping, scanty; fertile, erect scattered with more or less irregularly arranged spinose branches near the apex; conidia globose, hyaline, borne singly on the tips of the branches.

This appears most nearly related to the genus *Monosporium* Bon., as treated by Saccardo, but differs in the much simpler fertile hyphae with the peculiar spur-like branches, to which the name refers. The type of the genus is

**Plectrothrix globosa** sp. nov.

Evenly effused or slightly tufted; sterile hyphae, scanty, hyaline or subhyaline or subhyaline, septate; fertile hyphae, erect, evenly scattered over the matrix or sometimes in small groups, 3-5-septate, hyaline or slightly colored toward the base, 250-350  $\times$  3-4  $\mu$ , apex acute with 3-9 short, conical or spur-like branches, which are usually not longer than the diameter of the spores; the lower sometimes prolonged and dichotomous at the tip; conidia globose, hyaline, 15-20  $\mu$  diam., contents homogeneous.

On leaves of *Vaccinium macrocarpon* kept in a moist chamber in the laboratory, Dept. of Agriculture, Washington, D. C. Type material no. 1108, C. L. S. in Myc. Herb. U. S. Dept. Agriculture. This fungus followed regularly the appearance and maturity of *Pestalozzia guelpini vaccinii* on cranberry leaves kept in a moist chamber from one to two weeks.

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